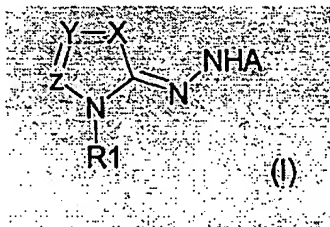


## C L A I M S

1. Ready-to-use agent for coloring keratin fibers, characterized in that it contains  
 (a) at least one hydrazone derivative of formula (I) or a physiologically compatible salt thereof



wherein

**X** denotes oxygen, sulfur or N-R<sub>2</sub>,

**Y** denotes C-R<sub>3</sub> or nitrogen and

**Z** denotes C-R<sub>4</sub> or nitrogen,

provided that the heterocyclic part of the compound of formula (I) contains at the most three heteroatoms;

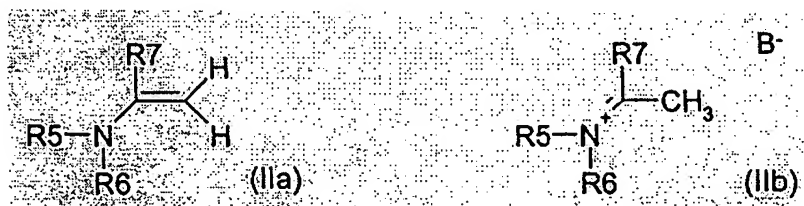
**A** denotes hydrogen, an acetyl group, a trifluoroacetyl group, a formyl group, a (C<sub>1</sub>-C<sub>6</sub>)-alkylsulfonyl group or an arylsulfonyl group;

**R<sub>1</sub>** and **R<sub>2</sub>** can be equal or different and independently of each other stand for a saturated or unsaturated (C<sub>1</sub>-C<sub>12</sub>)-alkyl group, a halogen-substituted (C<sub>1</sub>-C<sub>12</sub>)-alkyl group, a hydroxy-(C<sub>1</sub>-C<sub>12</sub>)-alkyl group, an amino-(C<sub>1</sub>-C<sub>12</sub>)-alkyl group, a sulfonic acid-(C<sub>1</sub>-C<sub>12</sub>)-alkyl group, a formyl group, a -C(O)-(C<sub>1</sub>-C<sub>12</sub>)-alkyl group, a -C(O)-phenyl group, a -C(O)NH-(C<sub>1</sub>-C<sub>12</sub>)-alkyl group, a -C(O)NH-phenyl group, a phenyl group or a benzyl group;

**R<sub>3</sub>** and **R<sub>4</sub>** can be equal or different and independently of each other denote hydrogen, a halogen atom, a saturated or unsaturated (C<sub>1</sub>-C<sub>12</sub>)-alkyl group, a halogen-substituted (C<sub>1</sub>-C<sub>12</sub>)-alkyl group, a hydroxy-(C<sub>1</sub>-C<sub>12</sub>)-alkyl group, a (C<sub>1</sub>-C<sub>12</sub>)-alkoxy group, a cyano group, a nitro group, an amino group, a (C<sub>1</sub>-C<sub>12</sub>)-alkylamino group, a di(C<sub>1</sub>-C<sub>12</sub>)-alkylamino group, a carboxyl group, a -C(O)O-(C<sub>1</sub>-C<sub>12</sub>)-alkyl group, a -C(O)O-phenyl group, a phenyl group, or a naphthyl group;

and when **Y** and **Z** denote C-R<sub>3</sub> and C-R<sub>4</sub>, **R<sub>3</sub>** and **R<sub>4</sub>** together with the remainder of the molecule can form a heterocyclic or carbocyclic, saturated or unsaturated ring system; and

- (b) at least one aromatic enamine of formula (IIa) or an acid addition salt thereof of formula (IIb)



wherein

**R5** denotes a mononuclear or polynuclear aromatic group,

**R6** denotes a (C<sub>1</sub>-C<sub>12</sub>)-alkyl group, a monohydroxy-(C<sub>1</sub>-C<sub>12</sub>)-alkyl group or a mono-(C<sub>1</sub>-C<sub>6</sub>)-alkoxy-(C<sub>1</sub>-C<sub>6</sub>)-alkyl group, wherein oxygen atoms can be present between the carbon atoms of the alkyl chain, and

**R7** denotes a (C<sub>1</sub>-C<sub>12</sub>)-alkyl group, a mono-(C<sub>1</sub>-C<sub>6</sub>)-alkoxy-(C<sub>1</sub>-C<sub>6</sub>)-alkyl group, a (C<sub>1</sub>-C<sub>6</sub>)-alkylene-(C<sub>1</sub>-C<sub>6</sub>) group, a (C<sub>1</sub>-C<sub>6</sub>)-alkoxy-(C<sub>1</sub>-C<sub>6</sub>)-alkylene group or -O-, NR<sub>8</sub>- or -S-, wherein

**R8** denotes a (C<sub>1</sub>-C<sub>12</sub>)-alkyl group, a mono-(C<sub>1</sub>-C<sub>6</sub>)-alkoxy-(C<sub>1</sub>-C<sub>6</sub>)-alkyl group, a monohydroxy-(C<sub>1</sub>-C<sub>12</sub>)-alkyl group or hydrogen, and the **R5** and **R7** groups together with the nitrogen atom and the carbon atom of the basic enamine structure form a cyclic linkage, and

**B**<sup>-</sup> denotes an anion of an organic or inorganic acid; and

(c) at least one oxidant.

2. Agent as defined in claim 1, characterized in that in formula (I) **X** denotes sulfur, **Y** denotes C-R3, **Z** denotes C-R4 and **A** denotes hydrogen.

3. Agent as defined in claim 1 or 2, characterized in that the hydrazone derivative of formula (I) is selected from among

3-methyl-2(3H)-thiazolone hydrazone,

3,4-dimethyl-2(3H)-thiazolone hydrazone,

4-tert.butyl-3-methyl-2(3H)-thiazolone hydrazone,

3-methyl-4-phenyl-2(3H)-thiazolone hydrazone,

3-methyl-4-(4-tolyl)-2(3H)-thiazolone hydrazone,

4-(4-methoxy)phenyl-3-methyl-2(3H)-thiazolone hydrazone,

4-(4-ethoxy)phenyl-3-methyl-2(3H)-thiazolone hydrazone,

4-(4-bromophenyl)-3-methyl-2(3H)-thiazolone hydrazone,

4-(3-bromophenyl)-3-methyl-2(3H)-thiazolone hydrazone,

4-(4-chlorophenyl)-3-methyl-2(3H)-thiazolone hydrazone,

4-(3-chlorophenyl)-3-methyl-2(3H)-thiazolone hydrazone,

3-methyl-4-(4-nitrophenyl)-2(3H)-thiazolone hydrazone,

3-methyl-4-(3-nitrophenyl)-2(3H)-thiazolone hydrazone,

4-[(1,1'-biphenyl)-4-yl]-3-methyl-2(3H)-thiazolone hydrazone,

ethyl 2-hydrazono-2,3-dihydro-3-methyl-4-thiazolecarboxylate,

3,4,5-trimethyl-2(3H)-thiazolone hydrazone,

3,4-dimethyl-5-phenyl-2(3H)-thiazolone hydrazone,

3,5-dimethyl-4-phenyl-2(3H)-thiazolone hydrazone,

4,5-diphenyl-3-methyl-2(3H)-thiazolone hydrazone,

5-ethyl-3-methyl-4-phenyl-2(3H)-thiazolone hydrazone,

4-(4-bromophenyl)-3-methyl-5-phenyl-2(3H)-thiazolone hydrazone,

3-methyl-5-phenyl-4-(4-tolyl)-2(3H)-thiazolone hydrazone,

5-(4-chlorophenyl)-4-phenyl-3-methyl-2(3H)-thiazolone hydrazone,  
 5-(4-chlorophenyl)-4-(4-methoxyphenyl)-3-methyl-2(3H)-thiazolone hydrazone,  
 ethyl 2-hydrazono-2,3-dihydro-3,4-dimethyl-4-thiazolecarboxylate,  
 4-amino-2-hydrazono-2,3-dihydro-3-methyl-5-thiazole carbonitrile  
 4,5-dimethyl-3-ethyl-2(3H)-thiazolone hydrazone,  
 ethyl 2-hydrazono-2,3-dihydro-3-ethyl-4-methylthiazolecarboxylate,  
 5-methyl-3-(1-methylethyl)-4-phenyl-2(3H)-thiazolone hydrazone,  
 4,5-diphenyl-3-(1-methylethyl)-2(3H)-thiazolone hydrazone,  
 4,5-diphenyl-3-propyl-2(3H)-thiazolone hydrazone,  
 3-butyl-4,5-diphenyl-2(3H)-thiazolone hydrazone,  
 4,5-diphenyl-3-(2-methylpropyl)-2(3H)-thiazolone hydrazone,  
 3-(2-propenyl)-2(3H)-thiazolone hydrazone,  
 4-methyl-3-(2-propenyl)-2(3H)-thiazolone hydrazone,  
 4-tert.butyl-3-(2-propenyl)-2(3H)-thiazolone hydrazone,  
 4-phenyl-3-(2-propenyl)-2(3H)-thiazolone hydrazone,  
 4,5-diphenyl-3-(2-propenyl)-2(3H)-thiazolone hydrazone,  
 3-hydroxyethyl-2(3H)-thiazolone hydrazone,  
 3-hydroxyethyl-4-methyl-2(3H)-thiazolone hydrazone,  
 3-aminoethyl-2(3H)-thiazolone hydrazone,  
 3-aminoethyl-4-methyl-2(3H)-thiazolone hydrazone,  
 3-phenyl-2(3H)-thiazolone hydrazone,  
 4-methyl-3-phenyl-2(3H)-thiazolone hydrazone,  
 3,4-diphenyl-2(3H)-thiazolone hydrazone,  
 4-p-biphenyl-3-phenyl-2(3H)-thiazolone hydrazone,  
 4-(4-methoxy)phenyl-3-phenyl-2(3H)-thiazolone hydrazone,  
 4-tert.butyl-3-phenyl-2(3H)-thiazolone hydrazone,  
 3,4-diphenyl-5-methyl-2(3H)-thiazolone hydrazone,  
 3,4,5-triphenyl-2(3H)-thiazolone hydrazone,  
 4,5-dimethyl-3-(phenylmethyl)-2(3H)-thiazolone hydrazone,  
 ethyl 2-hydrazono-2,3-dihydro-3-[(phenylamino)carbonyl]-4-methylthiazolecarboxylate  
 3-methyl-4,5,6,7-tetrahydro-2(3H)-benzothiazolone hydrazone,  
 3-methyl-2(3H)benzothiazolone hydrazone,  
 3,6-dimethyl-2(3H)benzothiazolone hydrazone,  
 6-chloro-3-methyl-2(3H)benzothiazolone hydrazone,  
 7-chloro-3-methyl-2(3H)benzothiazolone hydrazone,  
 6-hydroxy-3-methyl-2(3H)benzothiazolone hydrazone,  
 5-methoxy-3-methyl-2(3H)benzothiazolone hydrazone,  
 7-methoxy-3-methyl-2(3H)benzothiazolone hydrazone,  
 5,6-dimethoxy-3-methyl-2(3H)benzothiazolone hydrazone,  
 5-ethoxy-3-methyl-2(3H)benzothiazolone hydrazone,

6-ethoxy-3-methyl-2(3H)benzothiazolone hydrazone,  
 3-methyl-5-nitro-2(3H)benzothiazolone hydrazone,  
 3-methyl-6-nitro-2(3H)benzothiazolone hydrazone,  
 5-acetamido-3-methyl-2(3H)benzothiazolone hydrazone,  
 6-acetamido-3-methyl-2(3H)benzothiazolone hydrazone,  
 5-anilino-3-methyl-2(3H)benzothiazolone hydrazone,  
 6-anilino-3-methyl-2(3H)benzothiazolone hydrazone,  
 2-hydrazono-2,3-dihydro-3-methyl-6-benzothiazolecarboxylic acid,  
 2-hydrazono-2,3-dihydro-3-methyl-4-benzothiazolesulfonic acid,  
 2-hydrazono-2,3-dihydro-3-methyl-5-benzothiazolesulfonic acid,  
 2-hydrazono-2,3-dihydro-3-methyl-6-benzothiazolesulfonic acid,  
 2-hydrazono-2,3-dihydro-3-methyl-7-benzothiazolesulfonic acid,  
 2-hydrazono-2,3-dihydro-N,N,3-trimethyl-6-benzothiazolesulfonamide,  
 [(2-hydrazono-2,3-dihydro-3-methyl-6-benzothiazolyl)oxy]acetic acid hydrazide,  
 3-methylnaphtho-[2,3-d]thiazol-2(3H)one hydrazone,  
 3-ethyl-2(3H)benzothiazolone hydrazone,  
 6-ethoxy-3-ethyl-2(3H)benzothiazolone hydrazone,  
 3-propyl-2(3H)benzothiazolone hydrazone,  
 3-butyl-2(3H)benzothiazolone hydrazone,  
 3-hexyl-2(3H)benzothiazolone hydrazone,  
 3-hydroxyethyl-2(3H)benzothiazolone hydrazone,  
 3-aminoethyl-2(3H)benzothiazolone hydrazone,  
 3-p-methylbenzyl-2(3H)benzothiazolone hydrazone,  
 2-hydrazono-2,3-dihydro-3-(2-hydroxyethyl)-6-benzothiazolecarboxylic acid,  
 2-hydrazono-2,3-dihydro-6-methoxy-3(2H)benzothiazolepropanesulfonic acid,  
 6-hexadecyloxy-2-hydrazono-3(2H)benzothiazolepropanesulfonic acid,  
 ethyl 2-keto-3-benzothiazoline acetate hydrazone,  
 3-acetyl-2(3H)-benzothiazolone hydrazone and  
 2-hydrazono-3(2H)benzothiazole carboxaldehyde.

4. Agent as defined in claim 1, characterized in that in formula (IIa)/(IIb) **R5** and **R7** together with the nitrogen atom and the carbon atom of the enamine structure form a cyclic linkage.

5. Agent as defined in claim 4, characterized in that **R7** on the aromatic **R5** group is linked to the carbon atom in the ortho-position to the enamine-substituted carbon.

6. Agent as defined in one of claims 1, 4 or 5, characterized in that the aromatic enamine of formula (IIa) or (IIb) is selected from among

1,2,3,3-tetramethyl-3H-indolium chloride,  
 1,2,3,3-tetramethyl-3H-indolium bromide,

1,2,3,3-tetramethyl-3H-indolium hydrogen sulfate,  
 1,2,3,3-tetramethyl-3H-indolium sulfate,  
 1,2,3,3-tetramethyl-3H-indolium tetrafluoroborate,  
 3-ethyl-1,2,3-trimethyl-3H-indolium chloride,  
 3-ethyl-1,2,3-trimethyl-3H-indolium bromide,  
 3-ethyl-1,2,3-trimethyl-3H-indolium sulfate,  
 3-ethyl-1,2,3-trimethyl-3H-indolium tetrafluoroborate,  
 1-ethyl-5-methoxy-2,3,3-trimethyl-3H-indolium chloride,  
 1-ethyl-5-methoxy-2,3,3-trimethyl-3H-indolium bromide,  
 1-ethyl-5-methoxy-2,3,3-trimethyl-3H-indolium sulfate,  
 1-ethyl-5-methoxy-2,3,3-trimethyl-3H-indolium tetrafluoroborate,  
 5-methoxy-1,2,3,3-tetramethyl-3H-indolium chloride,  
 5-methoxy-1,2,3,3-tetramethyl-3H-indolium bromide,  
 5-methoxy-1,2,3,3-tetramethyl-3H-indolium sulfate,  
 5-methoxy-1,2,3,3-tetramethyl-3H-indolium tetrafluoroborate,  
 5-nitro-1,2,3,3-tetramethyl-3H-indolium chloride,  
 5-nitro-1,2,3,3-tetramethyl-3H-indolium bromide,  
 5-nitro-1,2,3,3-tetramethyl-3H-indolium sulfate,  
 5-nitro-1,2,3,3-tetramethyl-3H-indolium tetrafluoroborate,  
 2,3-dimethylbenzothiazolium chloride,  
 2,3-dimethylbenzothiazolium bromide,  
 2,3-dimethylbenzothiazolium iodide,  
 2,3-dimethylbenzothiazolium methylsulfate,  
 3-ethyl-2-methylbenzothiazolium chloride,  
 3-ethyl-2-methylbenzothiazolium bromide,  
 3-ethyl-2-methylbenzothiazolium iodide,  
 3-ethyl-2-methylbenzothiazolium methylsulfate and  
 3-ethyl-2-methylbenzothiazolium p-toluenesulfonate.

7. Agent as defined in claim 1 to 6, characterized in that the oxidant is selected from among hydrogen peroxide or the addition compounds thereof, persalts, peracids and enzymatic oxidation systems.

8. Agent as defined in claim 7, characterized in that the oxidant is selected from among hydrogen peroxide and an addition product thereof and persalts.

9. Agent as defined in one of claims 1 to 8, characterized in that it contains each of the hydrazone derivatives of formula (I) and the aromatic enamines of formula (IIa) and (IIb) and the oxidant in a total amount from 0.01 to 10 weight percent.

10. Agent as defined in one of claims 1 to 9, characterized in that it contains additionally from 0.01 to 10 weight percent of a physiologically harmless direct dye from the group of cationic and anionic dyes, disperse dyes, nitro dyes, azo dyes, quinone dyes and triphenylmethane dyes.
11. Agent as defined in one of claims 1 to 10, characterized in that it has a pH from 7 to 11.
12. Agent as defined in one of claims 1 to 11, characterized in that it is a hair colorant.
13. Two-component kit consisting of a dye carrier composition (A1) containing the compound of formula (I) and another dye carrier composition (A2) containing the aromatic enamine of formula (IIa) or (IIb) and an oxidant.
14. Three-component kit consisting of a dye carrier composition (A1) containing the compound of formula (I), another dye carrier composition (A2) containing the aromatic enamine of formula (IIa) or (IIb) and an oxidant, and a third component (A3) containing an agent for pH adjustment.
15. Two-component kit consisting of a powdered dye carrier composition (A1) containing the compounds of formula (I), the compounds of formula (IIa) or (IIb) and an oxidant as well as optionally other common powdered cosmetic additives, and a liquid cosmetic composition (A2).
16. Three-component kit consisting of a dye carrier composition (A1) containing the compounds of formula (I), another dye carrier composition (A2) containing the compounds of formula (IIa) or (IIb) and an oxidant-containing third component (A3).
17. Method for coloring hair whereby a colorant as defined in one of claims 1 to 12 is applied to the hair, and after an exposure time of 5 to 60 minutes at a temperature from 20 to 50 °C the hair is rinsed with water, optionally washed with a shampoo and then dried.